DIY Trans Healthcare

History & Practice

"Doctor's Who: Radical Lessons from the History of DIY Transition by Jules Gill-Peterson. Originally published in The Baffler No. 65, October 2022
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More of Jules Gill-Petersons work can be found at https://www.jgillpeterson.com/

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The Fairy Wings Collective appears to exist on the internet, and we love that.

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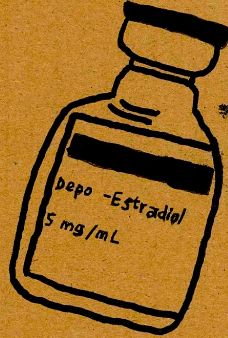

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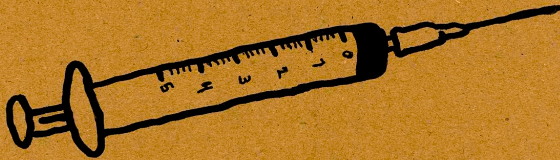

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History

Doctor's Who?

Radical Lessons from the History of DIY Transition

By Jules Gill-Peterson
October 2022

Fifty years ago, a small group of women of color boarded a bus in Southern California bound for Tijuana, Mexico. They may or may not have stuck out in the crowd of Americans who crossed the border daily for the cheaper rates on goods and services. Once in Mexico, these women, who had journeyed all the way from San Francisco, walked into a pharmacy, bought out its entire stock of estrogen, and then carefully hid it inside their luggage. Back home, they made straight for the Tenderloin.

These women were trans—poor, many unhoused, and most sex workers who faced unending street harassment from the police, clients, and other Tenderloin residents. They were also the self-appointed doctors of their community. In hotel rooms, shared apartments, and sometimes the back bathrooms of quiet bars, they resold and administered the estrogen to their friends—other trans women who could pay in cash for injections. At the turn of the 1970s, this group of ad hoc smugglers and lay doctors were part of a vast and informal market in hormones that stretched along most of the West

Coast. Similar networks no doubt spanned other regions of the country, though few left obvious traces behind.

Decades later, the story reads a little like something out of a heist film. What's not obvious from today's perspective on trans health care is that smuggling and reselling hormones was once quite normal, verging on unremarkable. Now, in an era of moral panic and shallow journalistic punditry dramatizing trans people as exceptional and mysterious, transition is conventionally narrated as an individual journey into the medical establishment. This form of institutionalized care is also under threat. In April, Alabama became the first state to successfully enact a ban on gender-affirming care for trans people under the age of nineteen. The law was soon challenged in federal court. Yet only a few months later, after the Supreme Court overturned Roe v. Wade, Alabama updated its legal reasoning in the case. If there is no constitutional right to abortion in the United States, then by analogy the state reserves the right to stop anyone it pleases from transitioning. "No one," argued state Attorney General Steve Marshall, parroting Justice Alito in Dobbs v. Jackson, "has a right to transitioning treatments" because such a right is not "deeply rooted in our Nation's history and tradition." The political winds are fast blowing in this direction: Alabama's law is one of over one hundred anti-trans bills that have been introduced across the country this year.

There is, however, a long history of medical transition in the United States—though it mostly unfolded outside the confines of the medical establishment. There was either no doctor to visit, or the gender clinic was a place that only the white middle class could successfully navigate. Instead, trans people—like the women in the Tenderloin in the 1970s—provided care to and for themselves. This kind of DIY, or do-it-yourself,

transition sits at the heart of trans history, though you wouldn't know it from reading today's headlines in so-called papers of record. As the liberal principles of bodily autonomy and the right to privacy are eviscerated, the history of DIY transition offers one path out of the quagmire of zero-sum legal arguments and toward what might come after, or in the place of, state-sanctioned care.

Alternative to What?

Institutional trans health care came about in the late 1950s and early 1960s, when a cohort of endocrinologists, psychiatrists, surgeons, and social scientists in the United States and Europe united around the diagnostic term transsexuality to describe those asking for hormones and surgeries to transition. Although trans people were hardly new, and neither were the medical procedures they were requesting, they faced almost universal hostility for asserting themselves. The medical establishment, unwilling to fathom why people without any medical conditions would want to transition, viewed them as sexual deviants—in the words of endocrinologist Harry Benjamin, "among the most miserable people I have ever met." Doctors thus styled the provision of care as a paternalistic errand of mercy.

The diagnosis of transsexuality came with a particularly cruel twist: it was explicitly designed to restrict access to transition. By establishing extremely narrow diagnostic criteria, doctors were able to reject the vast majority of potential patients from their clinics: either they did not perfectly "pass" as generic women or men; they were not heterosexual enough; they did not dress in a conservative fashion; or they weren't white, didn't have blue- or white-collar jobs, and were therefore broadly undeserving. While clinicians pretended outwardly

that their self-appointed role was to make sure no one who wasn't really trans made a decision they might later regret, in private they admitted to one another that there was no test that could determine who was or wasn't trans. By making transsexuality an exceptionally difficult diagnosis to qualify for, Benjamin and his cohort were protecting themselves from patients who might regret the poor quality of their care, particularly when it came to surgery. This regime of medical gatekeeping made transition through official means inaccessible to most and miserable for the few willing to attempt it.

What has long been overlooked, at least outside of trans circles, is that there were always other options—and most trans people tried every avenue at their disposal. But the history of DIY trans care doesn't leave behind the written records, research data, and publications that form conventional medical science, forcing researchers to rely on community newsletters, personal archives, and interviews to reveal the punk sensibility and medical ingenuity of those determined to provide care for themselves and their community.

One of the most democratic forms of DIY has always been the self-administration of hormones, which are identical to the hormones prescribed to non-trans people. Today, they are also chemically equivalent to endogenous hormones, making the management of their effects and health risks predictable and straightforward. Synthetic hormone medications were first developed and brought to market in the 1940s, and trans people were among their earliest adopters, though they were mostly purchased by middle-class American homes, promising a chemical solution to every conceivable problem. In the burgeoning trans print culture of the 1960s and 1970s—the

same time the women from San Francisco were making their trips to Tijuana—we get a sense of both the popularity of DIY hormones and the class conflicts they raised.

In 1963, rumors sourced from "the grapevine" swirled in the newsletter Turnabout that some trans women were obtaining the livestock hormone diethylstilbestrol "by ordering them from Sears Roebuck's animal nutrition department." To the middle-class writers of Turnabout, this veterinarian "scheme" was "foolish" not only on medical grounds but because it ran afoul of the Food and Drug Administration. "Don't try to be your own doctor," warned Virginia Prince, a prominent transvestite—a term that predates transsexuality and often referred to people who did not want to medically transition—a year earlier in her newsletter Transvestia. In a 1971 column for the newsletter New Trenns, Sally Ann Douglas, a trans woman embedded in an especially well-connected social network, remarked that "everywhere I go these days, I bump into gals who seem to be getting hormones from somewhere"—somewhere other than a doctor's office, that is. Calling it a trend, she wrote that "most of them seem to be pursuing a 'do-it-yourself' program of experimentation with various formulations" of estrogen on the market. Trans women often wrote into such newsletters looking for advice on this subject, but Douglas, like many of her peers, dismissed DIY approaches as reflecting a lack of courage—being too "shy" to go to a doctor—rather than problems of finances and gatekeeping.

Birth control pills, which were flooding the U.S. market by the end of the 1960s, became an attractive alternative because of their availability—even though their hormonal composition proved mostly ineffective for trans women and came with a high risk of blood clots (as they did for non-trans women)

because the dosage was quite high. In the newsletter Empathy Forum, columnist Jessie Collins summed up the risks in 1975: “There’s not any reason to take more chances than necessary, so stick to ‘nature’s own’ estrogens!” by which she meant hormones like Premarin, the most common estrogen then prescribed, which was derived from horse urine. In 1978, when Douglas was serving as an editor of All the Social Femmes, she replied to a letter from a reader asking about the pill: “I don’t have access to un-prescribed hormones myself, and I wouldn’t put you in touch with the underground, even if I knew who the girls were . . . because they all cheat.” By “cheat,” Douglas may have meant that the “underground” stood to profit off desperate trans women—but that was the central worry about most legitimate doctors, too.

It was easy for Prince, who publicly maintained she did not want to transition through surgery, or Douglas, who had the means to navigate the transsexual medical model successfully, to chastise anyone who found DIY more practical or the only option within reach. The written historical record skews in favor of DIY’s critics; the trans women of color who ran the black markets didn’t have newsletters in which they could publish their side of the story. (And considering what they were doing was to varying degrees illegal, they had little reason to leave traces of their work behind.) Yet DIY was straightforward and unapologetic in neighborhoods that relied on it. Angie Xtravaganza, one of the New York City ballroom performers made famous by Jennie Livingston’s documentary Paris is Burning, started hormones that way at fifteen. The “doctor” selling them went by Jimmy Treetop, and he hung out at the clubs where drag queens and femme queens gathered, offering syringes of estrogen and vitamin B-12 for $15 a pop. Xtravaganza supplemented these injections with progesterone in the form of birth control—a

savvy molecular combination that many doctors still fail to recognize when providing hormone replacement therapy.

DIY doctors who weren't trans were viewed with suspicion by their customers, but for Black and brown trans women already facing chronic police violence, becoming an entrepreneurial smuggler or ad hoc doctor was not always an appealing alternative. Stonewall veteran Miss Major, who came of age in Chicago in the late 1950s, remembered a doctor like Xtravaganza's who cornered the DIY market for Black trans women across the upper Midwest at a time when racism precluded getting a legitimate prescription. "He used these shots," she told historian Susan Stryker in an interview in the 1990s, "his shots were so potent, that after he shot you in the arm you went out to sit in his waiting room and would just fall asleep." Although she and her fellow customers were skeptical of the safety, she explained that "at the time you didn't ask questions . . . And to this day I don't know what was in it, but I know that at the time it made me feel like a femme fatale!"

What I have been able to reconstruct of the seriousness of this lay medical expertise has come through these sorts of personal testimonies. When I asked one trans woman of color who participated in this underground in the 1960s and 1970s to reconstruct the medical knowledge possessed by DIY practitioners, she put it as common sense born of necessity: "Everybody knows. Everybody knows. We knew more than our doctors." My follow-up questions about the types of estrogen, dosage, and the effects went unanswered because, as I learned in the interview, that just wasn't what mattered to her. Or perhaps I had come across too critical, like I was more interested in the risks than the rewards of DIY. My interviewee reminded me that the one doctor in town

offering hormones was, in her words, "making money hand over fist. He was so cheap he, instead of the regular medical scale, he had a bathroom scale. Instead of ashtrays in his waiting room, he had coffee cups. Instead of furniture he had, like, you go to the drugstore and get cheap lawn furniture. Plastic furniture, that's what he had." It's not hard to imagine why trans women would have trusted one of their own with DIY hormones over a doctor preying on their vulnerability for maximum profit, with little regard for medical ethics.

The TAO of Liberation

Do-it-yourself hormones are in many ways the focal point of DIY transition, but the history of DIY surgery adds another dimension to the story. In the mid 1950s, after former soldier Christine Jorgensen's trip to Denmark for surgery made the front page of the New York Daily News, rumors began to circulate in private correspondence among trans women that some were willing to do anything to get what Jorgensen had. On paper, there was nowhere in the United States to get surgery because it was considered legally dubious to perform, although a few cavalier surgeons, like Elmer Belt in Los Angeles, tried until peer and financial pressures built up and local hospital boards blocked procedures. In 1956 a transvestite in Southern California named Edythe Ferguson remarked in an amateur "dissertation" on her community that she had heard a story of someone who "recently has induced emergency treatment by self-mutilation—i.e., calling the ambulance just before slashing off his organs!" Like the newsletters warning against DIY hormones, Ferguson's sensationalism should be read through her middle-class suspicion that surgery wasn't necessary to be a successful woman. (She had a long career as a lawyer before transitioning to full-time life as a woman after retirement. For

many transvestites of her generation, the practical limitations on when they could live as women were incorporated affirmatively into their identities, meaning they were skeptical of the transsexual emphasis on a true inner self.) At the time, gender-affirming surgery was still new in the United States and not something all trans people saw in a positive light. Many from the generation that had come of age before World War II, like Ferguson, greeted the prospect of surgical transition with suspicion, even as they were fascinated by it. They weren't sure about the motives of doctors and what they would demand from patients in return.

Trans medicine as we know it today should be judged in its efficacy and ethics against DIY.

Behind the rumors of self-castration, or the occasional report like one from a 1974 activist newsletter that "two men" in San Francisco had been arrested for performing "ersatz sex change ops," lies a fascinating but much less dramatic story. Although many gender-affirming surgeries are too technical to attempt outside of a hospital setting, an orchiectomy (the removal of the testes), which is a procedure that many trans women decide to undergo (either on its own, or as a step towards vaginoplasty), is not particularly complicated. In fact, it's likely one of the oldest surgical procedures, dating back thousands of years both in the Mediterranean and on the Indian subcontinent. And while there are no official medical records to consult, there are stories held in tight-knit trans communities, corroborated by oral histories, that begin to sketch the contemporary trans surgical tradition that developed at some point between the late 1950s and 1970s.

Trans women could learn the surgical technique for an orchiectomy from a textbook, but more often they had the tacit assistance of a sympathetic doctor. Aleshia Brevard Crenshaw, who got her start as a performer at San Francisco's famous drag club Finocchio's in the 1950s, teamed up with her roommate to do orchiectomies on each another around 1960. As Crenshaw put it in an interview decades later, she went to visit a doctor named Styles who was already prescribing her hormones and told him that she wanted to castrate her cat. "Now whether he knew or not" what she was really planning, he drew a diagram of how to complete an orchiectomy for her, step by step. "And while he was drawing it," she recollected, "I opened his cabinet and stole a syringe and some Novocain." Having grown up in rural Tennessee, Crenshaw learned how to castrate animals at a young age, so adapting that knowledge felt like a reasonable leap—she would just have to be a good teacher to her roommate. A few days later, she and her friend sterilized their materials with Lysol and a quick blast in the oven, before setting up on a table in their home. Crenshaw took a painkiller, and they followed the doctor's advice to complete the surgery with the stolen medical materials. After recovering for a day, they went back to the office and informed him what they had done. Styles "acted shocked," gave the pair some penicillin, and told Crenshaw, "Of course you can't breathe a word of this, I can't put this in the record."

The risk of performing a surgery at home wasn't lost on Crenshaw. If something had gone seriously wrong, she and her roommate would have had to show up at a hospital, praying for a sympathetic reception. Even though an orchiectomy was relatively simple, and they both had good outcomes, the twenty-four hours after the surgery were scary

as they waited to see if there would be any complications. Ultimately the rewards far outweighed the risks. For many trans women who came of age on the streets of the Tenderloin, safety was a complex matter in real life. But looking back, Crenshaw stressed that the whole scene verged on hilarious—in fact, she put on a comedy record while performing the surgery. “If there’s one thing that we learn, from our survival on the streets, [it] is to have a great deal of fun. You laugh in the face of adversity.”

This underground scene of self-taught surgeons was transitory compared to later efforts of activists to found and operate free clinics, most of which never got off the ground. The Transsexual Action Organization (TAO)—based in Miami but with affiliates throughout the United States, the Caribbean, Latin America, the United Kingdom, and Europe—announced in 1974 that it planned to open a pilot clinic in San Francisco. Trans women would be offered gender-affirming surgery “at a cost of around $4,000” based on a new technique that promised much better results than university gender clinics, which despite their long waiting lists and byzantine gatekeeping still claimed to be the proper venue for transition.

Like many trans liberation groups, the TAO saw gender clinics as crass opportunists out to make money off desperate people instead of prioritizing good surgical outcomes. But their dream was never realized beyond the initial stages, in part because the surgeon they planned to hire turned out to have a litany of serious malpractice complaints against him—and later ended up in prison. More importantly, TAO was run entirely on the labor and ingenuity of trans women for whom almost every dimension of life called for urgent activism. TAO spent much of its energy focused on police brutality,

especially the police practice of raping trans women in local jails. Although the trans-run clinic lost priority among competing issues, long-term initiatives were always the hardest for a perpetually under-resourced organization to realize. But TAO's vision for expanding freedom through mutual aid and DIY transition was archived in the pages of their monthly newsletter for future generations.

Autonomous Zones

Today, an internet search for "trans DIY" opens onto vast networks of lay experts who gather everywhere from Reddit to Facebook to Discord to share their expertise. On smaller scales, most trans people share tips, advice, and consult with their close friends, lovers, and social networks when it comes to transition and health care. The motives that bring people from around the world to DIY vary. Some, like youth in Alabama, may soon have their doctors criminalized. Others, in the United Kingdom for instance, face a National Health Service that has effectively sabotaged publicly funded trans health care by extending wait times so far as to make them untenable. Across much of Europe, a eugenic legacy of sterilizing trans people as a condition of legal recognition has characterized state-funded medicine until as recently as the past five years. And in many other places around the world, there are no formal barriers but a dearth of affordable, competent providers. In Thailand, for example, famous for welcoming Western medical tourists seeking gender-affirming care, the average Thai person rarely has the financial means to transition through the same channels.

Institutional trans health care has roundly failed to resolve any of the basic inequities it created so many decades ago.

There are also broader reasons for the popularity of DIY that have less to do with scarcity and more to do with institutional neglect. In light of the longstanding absence of peer-reviewed studies on matters beyond surgery and hormones, as well as a lack of resources for researching what is perceived as a very small population, many clinicians are unable to answer trans people's basic questions about their health—and use that uncertainty as a reason to withhold care. In other words, doctors punish their trans patients for the legacy of institutional neglect. According to a 2021 U.S. survey, nearly half of trans people reported experiencing explicit discrimination in health care in the previous year. And that, once again, is only among those people who have some access to a doctor in the first place. Institutional trans health care has roundly failed to resolve any of the basic inequities it created so many decades ago—and with the tidal wave of anti-trans legislation sweeping the states, the situation is deteriorating at a breakneck pace.

The history of DIY trans care challenges the coerced helplessness of the neoliberal politics of health. It is a story in which normal people, typecast as the most vulnerable, made transition possible for their friends, families, lovers, and neighbors, no matter the barriers. While their motives and beliefs varied, they were all driven by pragmatism: taking care into their own hands was safer, cheaper, and generally more effective than waiting on permission from the state or their doctors, let alone approval from an insurance company. It also meant that gatekeepers and lawmakers couldn't revoke access on a whim or restrict it until its legality became meaningless. DIY trans history shows how tenacious and expert the most vulnerable have proven themselves to be without any support or legitimation.

But is resilience bred only by tragedy—a cautionary tale akin to the way the story of abortion before Roe v. Wade is told? Certainly, the smuggling, reselling, and administration of hormones by poor trans women of color took place in a context where there were no safer doctors to turn to for a prescription. Likewise, DIY surgeries were the result of a lack of legitimate access. But the presumption that DIY forms only in reaction to scarcity or in opposition to health care is an oversimplification. As many of the stories I've encountered during my research stress, most trans people's lives are characterized by a mix of DIY and institutional health care depending on circumstances. Their relationship is never static. But DIY challenges the monopoly on care through which institutional medicine, and the liberal legal framework derived from the state, together control not just access, but the quality of life that depends on it.

As feminists and trans activists struggle against the liquidation of the right to privacy, digging into the connections between DIY transition and DIY abortion is instructive. Both reject how medicalization and the state collude to restrict people's autonomy. And DIY history suggests that one of the core lessons of trans feminism is that you can steal your body back from the state—not to hold it as private property, but because the state power that polices and punishes your body, just like the doctors who execute its arbitrary policies, is fundamentally illegitimate. DIY treats legitimacy as arising from the people whose lives are most affected by resources and care, not from the abstract power of the state or medical gatekeepers.

The trans liberation activists of the 1970s who dreamed of free clinics were part of a political movement that wanted to depathologize transition, so it was no longer treated as a

mental illness or a medical condition that required diagnosis and supervision from clinicians with no vested interest in trans people's happiness. Gay and lesbian activists won a major victory when homosexuality was taken out of the American Psychiatric Association's diagnostic bible, the Diagnostic and Statistical Manual of Mental Disorders (DSM), in 1973. But the removal of homosexuality was followed by the introduction of new trans diagnoses into the DSM in 1980, which permitted clinicians to retain their authority by shifting focus from sexuality to gender. Medical gatekeeping has expanded, rather than contracted, since then, even if that expansion is also, paradoxically, what makes insurance coverage possible today. Yet as Florida's recent attempt to publish its own made-up "standards of care" to deliberately exclude trans people from Medicaid reminds us, that coverage is only ever tenuous, no matter how many legitimate scientists or medical associations endorse it.

DIY has envisioned freedom in starkly different terms. Instead of pathologizing people to grant them access to medical resources, or relying on the state's flimsy blessing, activists imagined community-run clinics where people to whom transition matters most would support one another and distribute the care they needed. In that framework, both abortion and gender transition would be something like resources for personal and collective autonomy—means to a life characterized by abundance, not dramatized medical procedures contingent on bizarre criteria of deservingness.

In DIY, trans people are the experts on their own lives. Alongside feminists who demand that anyone needing abortion be treated as credible, trans people command self-evident respect. And through the lens of DIY, to be trans meaningfully becomes a question of doing, rather than one of

identity. When people don't have to prove that they conform to any external definition, they are free to pursue what they want without fear of reprisal. And this version of autonomous, community-level responsibility could strengthen and maintain continuous, on-demand access to abortion, among many other politicized resources.

The story of DIY transition offers a more complex alternative to the zero-sum game in which today's highly imperfect version of trans institutional medicine will either be banned or remain technically available but effectively inaccessible to most people. DIY asks us to consider whether institutional medicine is even a viable reference for trans people, or if the truth might be the reverse: trans medicine as we know it today should be judged in its efficacy and ethics against DIY. The latter has left a more meaningful imprint on trans people's lives over the past century. The women of color who made the journey to Tijuana, many of whom were teenagers when they first arrived in San Francisco seeking a home, would not have benefited from the pediatric gender clinics that exist today; they would have been turned away at the door. Despite that, they were far from helpless, and they didn't need rescuing. Their vision for unconditional care might be strong enough to ensure that the looming spread of criminalization, suffering, and violence does not define our collective future.

Practice

Producing Transdermal Estrogren

A Do-It-Yourself Guide

By: The Fairy Wings Collective, adapted by Crimethinc
December 2022

This guide describes how a small collective produced and distributed transdermal estrogen using reproducible do-it-yourself methods.

What follows here is not medical advice; it is a report on an experiment in process, providing proof of concept. Generally speaking, if you want to take estrogen and you have the option to acquire it through the prevailing medical institutions, we encourage you to consider taking that route. At the same time, it is already difficult for some people who need estrogen to access it that way, and those difficulties may only increase in the future—so we believe that information like this should be distributed widely. Taking a hands-on approach to healthcare can give you a more direct relationship to your agency, which can give you more control over your safety in the long run, provided you learn about the risks and reflect properly on them.

Above all, we believe in the idea that everyone should be free to position themselves as they see fit within the matrix of gender. Neither governments, religions, patriarchal authorities, nor anyone else should be able to confine us within their narrow visions of who we should be or who we can become.

This guide was adapted from a zine by the Fairy Wings Collective (1). links to resources will be marked by numbers in parentheses, with a list of those resources at the end of this zine.

Introduction

We made our own transdermal estrogen a started giving it out to people. Transdermal means you just rub it on your skin and that's it: no needles, no adhesives, no eating it. When we tell other anarchists about this, they're usually like, "Oh yeah, I talked to some friends about that once, but we didn't know how to do it." We got together with about four people and scrounged up a few thousand bucks and decided to figure it out. This article describes what we did, some of the risks involved, and how you can do it yourself.

With access to transgender health care becoming increasingly politicized and restricted, especially in certain parts of the country, being able to make our own hormones is a necessary step towards ensuring that people in our communities have access to the care they need. Doing this project ourselves instead of relying on doctors, prescriptions, and the established medical supply chain offers more privacy, autonomy, and ease of access for individuals who might find it difficult to access hormones through traditional methods. Our primary audience includes young people, people who

are transient or without an established address, people who are uninsured or underinsured, and those living in rural or politically conservative areas. We don't think we can reach all of those people via our little distribution network—that's why we are proposing that anarchists in other areas start making DIY estrogen in a decentralized way. We encourage anyone who wants to participate in this project to read this guide and start producing their own supply.

First, some good news: it works! Several individuals started using the transdermal estrogen we made without taking any other exogenous hormones. After several weeks, they had successfully raised their estrogen levels. They were able to adjust the dose by taking more or changing the administration site, as different places on your body offer a higher or lower efficacy of absorption. Below, we'll offer a more detailed report on their experiences.

Estradiol suppresses your body's production of other sex hormones through a negative feedback loop; an estradiol level of 150 pg/ml is usually enough to suppress your body's production of testosterone into the female range. However, current standards of care and some individuals' body chemistry may require an anti-androgen to achieve these levels. Since the dose is flexible and site of administration can be changed to suit your needs, some of this depends on your body and the results you want.

For more information, check out TransFemScience.org—specifically this article (2) .

The process of producing a usable form of estradiol is pretty straightforward: buy ingredients, mix them together in set ratios, apply. Based on our experiences, the hardest parts

were researching how exactly to turn estradiol powder into something usable and attempting to find a lab to analyze the estradiol we bought. Now that we've done those things, you can copy our steps and end up with about the same result.

We encourage you to do your own research and learn as much as you can on this topic. None of us are experts and we would all benefit from learning from each other. The way we chose to approach this is not the only way. We could have bought a pill press and a binding agent and cranked out estradiol pills. We could have produced injectable estradiol. However, based on our limited knowledge of chemistry and medicine and our cleanliness standards (reasonable, but not a clean room and not sterile), we felt that producing transdermal estrogen was the safest and easiest approach. Contamination risk is very real and injectable products must meet a much higher standard to be safe for use.

You will need:

Secure methods for communication and online activity: encrypted email (Protonmail) and messaging (Signal), encrypted document storage (Cryptpad), Tails stick or Tor

Addresses for receiving online orders

Money: roughly $2000 to buy all supplies for 250 bottles of about six months' supply each

A physical location to make the product and store supplies

A distribution location or plan

Trusted friends to help with production, distribution, and any other parts of the process

Rather than setting up a formal organization, we favor a more decentralized approach. This is why we called our project Boobs not Bombs—an homage to Food not Bombs, a call to action for people in any community to feed their neighbors. Anyone with a small set of supplies can make enough do-it-yourself estrogen to serve hundreds of people. We intentionally chose reproducible methods. Our goal is to equip others to make do-it-yourself hormones as well. You know your community and its needs better than we do. Via direct action, we can secure the autonomy of queer and trans folks, even in the face of an increasingly oppressive and surveilled future.

If you are starting a Boobs Not Bombs, Email us at Fairywingsms@protonmail.com

Boobs Not Bombs!

Disclaimer: Neither the vials we produced nor this text are intended to diagnose, treat, prevent, or cure any medical illness. None of these statements has been evaluated by the Food and Drug Administration. They are NOT medical advice.

Boobs Not Bombs is a reference to Food Not Bombs , an anarchist food distribution project dating back decades. Boobs Not Bombs is our name for the idea of distributing estrogen cheaply or for free; Fairy Wings Mutual Aid is the name of our specific chapter. This chapter was created as an explicitly anarchist project and we have sought to organize it around anarchist principles. If anything in here is unclear or confusing don't hesitate to send us an email at fairywingsma@protonmail.com. We'd love to hear from you!

Application

A standard dose is 0.57 ml—about a quarter of a dropper—applied to the scrotum or neolabia once per day. Based on the bloodwork we have done so far, this should be enough to fully suppress testosterone into the female range and induce feminization.

For lower levels, switch to a less efficient application site or reduce the dosage. You can choose from the following application sites (3) , listed from **least** absorbent to **most** absorbent: the soles of the feet or palms, abdomen, forearm, armpit, scrotum/neolabia.

If your levels aren't high enough, you could increase the dosage or apply a dose twice per day. It's worth noting that once testosterone has been suppressed, higher levels of

estradiol have not been shown to produce any benefit and carry additional risk.

Applying lotion afterwards at the site of application will slightly increase absorption. Using sunscreen will decrease absorption. For one hour afterwards, make sure not to make skin-to-skin contact between the site of application and anyone who doesn't want additional estrogen in their body.

Risks

As in many do-it-yourself projects (and most activities), there are risks to making or using this product.

Some risks have to do with the supply chain. For example, we tested the estradiol we bought as raw powder and found it to be 97.2% estradiol. The test also showed that it contained no heavy metals. That being said, we weren't able to figure out what the remaining 3% was. Is there something dangerous in that 3%? We don't know.

The same is probably true for grocery store supplements as well. If a company is accused of putting dangerous chemicals in its supplements, it might be investigated, but otherwise, supplements are not regulated by the Food and Drug Administration. In our opinion, this estrogen is probably about as dangerous as a standard over-the-counter supplement. If you are able to get estradiol prescribed by a doctor and you can afford it, it will undoubtedly be higher quality, and we recommend you do so.

Nevertheless, that isn't possible for many people. That's where this guide comes in.

There are inherent risks to taking estradiol, as well. The following is written for AMAB (Assigned Male at Birth) people. For AFAB people, the risks are greater and the rewards are very different.

For all people, estradiol is associated with blood coagulation. This can lead to a number of adverse events including heart attacks, strokes, and blood clots, also known as thrombosis. Of particular concern are venous thromboembolisms, or VTE events—blood clots in veins moving blood towards the heart. For AMAB people that take estradiol, the increased risk depends on the dose and the means of administration. The risks are greater with higher levels; some ways of taking estradiol are more associated with VTE events than others. The exact risks are not precisely known, as research on trans people is poorly funded. However, based on the available data, it seems that transdermal estradiol levels within 100-200 pg/ml (and perhaps as high as 300 pg/ml) produce little or no additional risk of clotting events. For a fuller overview of the research, read more on transfemscience.org (4).

Another risk to consider is breast cancer. Like blood clots, there seems to be a causal link between exposure to estrogens and breast cancer. This also seems to be dose dependent, so higher doses of estradiol will result in an increased risk of breast cancer. As with blood clots, the exact degree of risk isn't precisely known; for AMAB people taking estradiol, the risk level is likely (5) to be somewhere between the risk levels for cis men and cis women.

Lastly, the primary effects of estradiol itself—feminization and suppression of your body's reproductive processes—could be considered risks, depending on your perspective. For better or

worse, the vast majority of effects from estradiol, like smoother skin and fat distribution, are reversible. However, some effects are permanent, including breast development and, possibly, infertility. Anyone who might use this product should be made aware of the risks so they can make an informed decision.

Estrogen is not a scheduled substance. It is legal to import it. The other ingredients you need are all legal to purchase. As long as an item is not labelled for medicinal use, it is legal to sell or give away even if it contains potentially bioactive ingredients—think of herbal medicines sold in stores. In many places, you can buy estrogen over the counter to alleviate symptoms of menopause. All in all, we think that the present legal risk is very low.

However, this could change at any time: several states have passed laws against mailing or importing misoprostol and some have introduced new laws restricting access to gender-affirming medical care for youth or even adults. It's probably better to stay a bit below the radar in case this becomes illegal later. Currently, our chief security concern is publicity from hostile far-right groups: we're more concerned about showing up on Fox News than FBI raids.

Unlike estrogen, testosterone *is* a scheduled drug—it is generally illegal to access it without a prescription. Producing and distributing testosterone would involve a different set of legal risks.

As there is insufficient research on trans health, the long-term health consequences of starting and stopping hormone treatment are unknown. Hormones affect many body systems in ways Western medicine still doesn't understand, and there

is little data available on the long-term effects of intermittent hormone use.

Results

So far, the Fairy Wings chapter of Boobs not Bombs has distributed approximately 200 bottles of transdermal estrogen. Early on, we invited several volunteers to switch to Boobs not Bombs estrogen and to test their estrogen and testosterone levels. As more bottles were distributed, people who were starting hormones for the first time also provided lab results. We asked volunteers to wait until they had been taking Boobs not Bombs estrogen for three to four weeks before they tested, in order to avoid lingering effects from other preparations of estradiol they may have been on previously. The results we collected do not meet the rigorous standards of a scientific study, especially considering the wide variety of possible administration sites, dosing, and individual variables including other medical conditions, concurrent medications (hormone-related and otherwise), lifestyle, and the like. However, we can provide the information we received from volunteers.

Since the beginning of the project, five people have taken or switched to Boobs not Bombs estrogen and provided numerical lab results. While we asked a standard set of questions of each person, some people were unable to have their testosterone levels checked and some provided incomplete information. At least one individual never took any lab tests, but did experience breast development and sensory changes.

One person reported applying a quarter of a dropper daily to the scrotum/neolabia, which resulted in estrogen levels of 250 pg/ml and testosterone 200 ng/dl. Two people applied the estrogen to their forearms: one used a half dropper per day and measured estrogen 94 pg/ml, while the other used one full dropper daily for estrogen levels of 125 pg/ml. The two people who administered this estrogen to their armpits were also both taking anti-androgens. Both applied a half dropper per day; one had estrogen levels of 200 pg/ml and the other 842 pg/ml (and testosterone of 33.3 ng/dl).

According to Transfemme Science (6)

Commonly recommended ranges for transfeminine people in the literature are 100 to 200 pg/mL (367–734 pmol/L) for estradiol levels and less than 50 ng/dL (1.7 nmol/L) for testosterone levels. However, higher estradiol levels of more than 200 pg/mL (734 pmol/L) can be useful in transfeminine hormone therapy to help suppress testosterone levels. Lower estradiol levels (less than or equal to 50–60 pg/mL [180–220 pmol/L]) are recommended and more appropriate for pubertal and adolescent transfeminine individuals.

If you want to share your own results, email us and tell us how long you've been taking this estrogen, any other hormone-related medications, your dose, administration site, and lab results (estrogen and testosterone levels).

Why?

For some people, there can be risks associated with **not** taking hormones, as well, and these can also be life-threatening. Those who want to restrict access to hormones often speak about the "irreversible changes" that are associated with taking hormones. In fact, our bodies are

always changing in irreversible ways. Taking exogenous hormones can be a way of intentionally participating in that change in order to move it in a direction that feels more aligned with how you want to be.

While there are numerous barriers that prevent people (especially trans people) from accessing hormones like estradiol, there are comparatively few mechanisms to ensure that everyone who wants hormones has access to them. Furthermore, even when the medical establishment is able to meet our needs, this only occurs on the terms of insurance corporations, medical review boards, the state, the family, and other institutions that have historically served to oppress, exploit, and exclude people. These institutions restrict access to hormones and other resources in order to reinforce cis-heteronormativity (the idea that being cis and straight is the only “correct” or “natural” way to be). They aim to reinforce these ideas and gate-keeping structures in order to diminish our bodily autonomy because that helps them to maintain control of all the other aspects of our lives. Rather than trying to work within and validate the existence of those institutions, we can deliberately choose to work outside of them. We believe everyone should be free of the coercive power of the state and should have access to the tools they need to shape their bodies however they want.

Some people believe that only massive institutions can meet people’s needs and that those institutions have to adopt repressive practices in order to do so. By making estradiol widely and easily available at little or no cost, we can help people access a greater degree of bodily autonomy and give people cause to question the necessity of centralization and control.

How?

The following instructions have been calculated for a batch that starts with 100 grams of estradiol. This number was chosen because it's relatively affordable and makes the math a little bit easier.

The formula that we used is based on a patent (technically two patents) we found for a transdermal birth control product. The patent describes a product that is 0.24% active ingredient, which is split between a progestin (0.18%) and estradiol (0.06%). We modified this recipe to include only estradiol at 0.24%. We recommend that you look over these patents to get an idea of what we're doing and to make sure we're not missing anything. Copies of these patents, the spreadsheets we used to calculate the amounts of each ingredient, and other helpful information are available at the link in the notes at the end of this document (7)

Before Getting Started

Before embarking on your own Boobs Not Bombs adventure, think carefully about the risks involved and whether you're willing to take them. Because Estradiol is not a controlled substance, what we are doing is legal—as far as we can tell—given that what we are offering is not intended to diagnose, treat, prevent, or cure any medical illness. Nevertheless, the fact that something is legal has never stopped the state from harassing people. This is especially true because trans people have unfortunately become a target for many conservative politicians. The prospect of people handing out estrogen on the street is ripe to get blown out of proportion by the right-wing media and politicians looking to score points by attacking trans people. If you aren't comfortable with these

risks, consider helping existing BnB efforts by donating to or contacting the authors of this text (boobsnotbombsma@protonmail.com).

If you decide you are willing to take these risks, watch this video (8) discussing why you should never speak to the police. You can also read this text (9) about security culture.

As a rule, don't discuss your involvement in this project with people that you don't trust. Only tell people what they need to know. If you need to discuss the project with others via electronic means, always use open-source encrypted software like Signal, ProtonMail, and Cryptpad. Of course, every approach has limitations and there is nothing you can do to guarantee that you haven't left a trace. The guidelines we have set out here should be regarded as a solid baseline to add to, rather than a security guarantee. For more information about digital security, read this (10).

Project Infrastructure

The first step in this project is to get together with your friends and comrades and see who would like to help make it a reality. If you don't have a network of trusted friends who are interested in helping, try going to the closest anarchist community center or mutual aid project and see what you can help out with. Hopefully, you will develop friendships with people in the course of working together. If all goes well, eventually Boobs Not Bombs can be one of the projects you can add to your shared repertoire!

If you are going to work on this project on your computer, we recommend that you get a Tails stick. This is a USB flash drive with the Tails operating system installed on it. Tails is a secure operating system that only connects to the internet via the Tor

network and saves absolutely nothing to your hard disk. To obtain a copy of Tails, have a friend that already has a Tails stick clone it. If you don't know anyone with Tails, you can download it here (11) and read a full set of instructions. If this process seems overwhelming, find a computer-savvy friend to help you.

Next, start your computer running Tails and create an email account with which to contact vendors. It is strongly recommended that you only sign in to this email from within Tails. Remember, Tails and Tor are not magic. If you sign in to your personal email account at the same time as you sign in to the email you are using for this project, you will have associated the two. Only work on one project at a time when using Tails.

To prepare for ordering and receiving shipments, get together with your friends and figure out how to receive the packages anonymously. The easiest way is to get a friend who isn't directly involved in the project to receive the package for you. Ship it to them under their own name and then pick it up from them. Receiving packages is a good way people can aid the project while limiting their involvement. Other possibilities include getting packages shipped to a friendly community center or an abandoned house, or dividing up the ingredients and shipping them sporadically to your own houses. For example, one person could order and receive the propylene glycol, another the diethylene glycol monoethyl ether, a third person the alcohol. Doing it in this way reduces the chances that an investigation could determine the pattern of purchases and deliveries.

If someone is receiving a package, it's usually best that they pay for the package themselves using their own payment methods and then you reimburse them in cash. You can probably send multiple packages to some people if the things they're receiving are not sketchy, such as scales and glass jars. At the same time, you should seek to minimize your online purchases. Wherever possible, buy things in person with cash. Do you need to buy glass overflow jars online, or can you get them from a thrift store?

You will need a certain amount of resources to get started. If need be, raise funds discreetly among your friends. You should be able to fund the entire project with about $2000. If you can, set aside more than this to allow for unexpected problems. Store these funds as cash in a secure location. Keep track of how much money comes in and how much has been spent on each item so you can see how much money you have left and identify ways to reduce expenses.

Your operation will need a physical location. An empty bedroom is big enough, though we don't recommend a bedroom that anyone lives in, as it would be difficult to store everything you need in a room along with someone's personal possessions. You should also think about security here. You could find a friendly community space that is willing to rent a room to a member of the project, come up with a persuasive cover story, and rent it as a personal room. Draft a lease that stipulates that the room is not to be entered without your permission and put a lock on the door. This both protects you and those you are renting from: in the event of trouble, they will have a lease to provide legal cover, confirming that as landlords, they are not responsible for what their tenants do.

You could use cryptpad (12) to create a spreadsheet to keep track of your finances. This includes managing your money and keeping track of prepaid cards—where they are, how much is on them, what they've been used for so far, and the billing information attached to them. For example, if a website requires you to put in a billing address for the card, make sure you note which billing address has been used for which cards. This way, you won't have the card get rejected due to using contradictory information.

First steps

1. Purchase and Test Estradiol

Cost: $800 ($300 for estradiol, $500 for the test)

Raw estradiol can be purchased directly from manufacturers listed on the Estrodiol PubChem Page (13) . The prices they quote are prohibitively expensive, and many manufacturers will only ship to businesses or research institutions. That may not be an insurmountable hurdle—it might suffice to find a friend with a .edu email address and an address to receive packages.

Alternatively, you can message gray market vendors from China, such as Hanzhong Han Traceability Biological Technology Co. Ltd. To find more vendors, try searching "estradiol suppliers china" on duckduckgo(14). They usually sell bulk amounts of estradiol; however, the quality may be lower as a result. When communicating with a vendor, only email them from your secure email account. See if you can pay via money order. If you can, purchase a money order with cash and mail it to them. If that is not an option, use cash to purchase a pre-paid debit card from Walmart or another big box store. You might be able to pay with bitcoin, but

make sure that the bitcoin itself was purchased in a manner that can’t be traced (e.g., with cash).

Purchase 100 grams of pure estradiol, CAS number 50-28-2. Have it shipped to you using one of the methods outlined above. If you used a prepaid debit card, make note of it in your spreadsheet.

If you bought your estradiol from a gray market supplier, you will need to test it when it arrives. Go to toxassociates.com. Order a comprehensive drug analysis: tell them you want a quantitative analysis of estradiol and a test for heavy metals. Pay for the test with a money order purchased with cash and await your results. If the test doesn’t come back clean (e.g., they sold you a bunch of baking soda), go back and start over.

If you can go in on this step with other groups like yours, you could save a lot of money. Assuming multiple chapters place an order of estradiol together, you’ll only need a single test for everyone.

You’re looking for the results to say >99% estradiol and no heavy metals or anything else detected. Ours was 97%. We would love to know what the other 3% is—but after extensive research, it appeared that we’d need thousands of dollars and corporate or academic credentials to find out. If you know of another way to identify impurities in a sample, please contact us! (fairywingsms@protonmail.com)

Purchase the Materials

1. Purchase 6 gallons of 95% alcohol.

Cost: $650

You can buy alcohol in bulk online from Laballey.com and organicalchohol.com. Laballey often offers good sales. Depending on the vendor, alcohol may be referred to as ethanol. Ethanol is the name for the kind of alcohol that you can drink. You could also use isopropyl alcohol, which is much cheaper—but *not for internal consumption,* as it causes organ damage and blindness. We went with ethanol because we wanted to stick as close to the patent as possible. The patent mentions that you can use isopropyl alcohol, but they imply that ethanol is preferred.

If you order from Laballey, bear in mind that they will automatically cancel any order that has a different shipping and billing address. To get around this, have a friend buy alcohol from them legitimately, paying with their own card and shipping it to their legal name. You will need to have alcohol shipped to someone older than 21 and they must sign for the package when it arrives.

You could also get around this step by buying Everclear from liquor stores. This has the advantage of being faster and available in return for cash, but it is also much more expensive—we calculated that it would be roughly three times more expensive to use Everclear.

Alcohol is extremely flammable. Six gallons of it should be considered a major hazard. Do not open the container it comes in until you're ready to make a batch. Store the alcohol far away from any fire hazards. Never smoke while working

with alcohol; make sure there are no open flames anywhere nearby.

2. Purchase two gallons of propylene glycol USP.

Cost: $150

Propylene glycol is a very common chemical. You can obtain it via a number of websites, including the aforementioned Laballey. Wherever you get it, make sure that it's pure propylene glycol, not propylene glycol mixed with something else.

USP (United States Pharmacopoeia) refers to a standard of purity for chemicals. All chemicals should be sold to you as USP. If you can afford it, you should send all of your reagents off for testing in addition to the estradiol.

3. Purchase two liters of diethylene glycol monoethyl ether USP.

Cost: $200

Follow the same steps as for propylene glycol to obtain diethylene glycol monoethyl ether. We could not find other vendors for diethylene glycol monoethyl ether besides Laballey.com.

4. Purchase a large wide mouth glass container for mixing.

Cost: $30

Throughout the manufacturing process, we use glass because it's nonreactive.

Realistically, it's hard to find wide-mouth glass containers larger than two or two and a half gallons. You can find five-gallon glass carboys (the kind of bottles used in water coolers), but it is difficult to mix liquids in them owing to their narrow mouths. You might be able to find a workaround involving a long, narrow stirring stick, a magnetic stirrer, or something else.

We used a wide-mouth glass container of approximately two-gallon capacity. Generally bigger is better, provided that you can find a way to stir it.

You might be able to find a large enough glass container at a store. If you can, use cash to buy it. If you can't find one in a store, there are plenty of options on Amazon.com.

5. Purchase an even larger glass container for storing the finished product.

Cost: $60

The size of this container doesn't matter so long as it is bigger than the mixing container and it is made of glass. It's unlikely you'll be able to purchase this item in person at a store. You can get a five-gallon glass carboy for $60 on Amazon.com.

6. Purchase seven wide-mouth glass containers of medium size.

Cost: $100

The size of these containers doesn't matter as much. Perhaps half a gallon. These should absolutely be purchased with cash at a store. Walmart and ACE Hardware offer six-packs of half gallon mason jars for something like $20. You can likely spend far less than $100 for all of these if you go to a thrift shop.

7. Purchase scales.

Cost: $75

One scale will need to be a higher capacity kitchen scale accurate to within .1 g. The other must be accurate down to 0.01 g. Make sure that the higher capacity scale can handle the weight of the mixing jar and water or alcohol. For the batch size we're talking about here, the scale should have a capacity of at least 15 pounds, preferably 20.

8. Purchase bottles and tincture droppers.

Cost: $600

There are several websites where you can buy bottles and droppers in bulk, including thebottlestore.com and containerandpackaging.com.

Buy at least 350 four-ounce amber Boston round bottles and an equal number of 1 ml tincture

droppers. Make sure that the bottles and droppers have matching neck sizes. In our case, we used the neck finish 24-400.

9. Purchase miscellaneous lab equipment.

Cost: $100

For this step, we're mostly thinking about gloves, goggles, a table if you need one, and any other small items.

10. Buy water.

Cost: $20

Buy four gallons of distilled water from any grocery store. It **must** be distilled water, not spring water, "purified" water, or anything else.

Make a batch

Overview

The basics of making transdermal estrogen are as follows: measure out all of the raw materials by mass, add them to a mixing container, mix vigorously, pour into a larger container, and bottle it from there. To bottle it, just pour the mixture out of the large carboy into a smaller wide-mouth container, then scoop it out and pour it into bottles. The point of using the carboy is to enable one team to continue to make two-gallon batches while another team bottles. Based on our experience, the bottleneck in this process, ironically, is bottling. Because we bottled by hand, that part took much longer than preparing the batch itself. Using the carboy is a way to speed up the process. Otherwise, the team making each batch will have to stop and wait until all of the transdermal estrogen has

been bottled before they can start making the next batch.

You'll be making about five batches of two gallons each. The process is actually pretty straightforward—it just takes a while to bottle. You should set aside about four hours for the whole process. Keep in mind that this will likely be messy, involving alcohol spilling over your work environment. You should pick a place where that won't be an issue and clean up as you go. Don't work by open windows where passersby can see what you're doing—they might think you're making drugs.

1. Label all of your containers.

Once you're ready to get started, clean your work surface, lay out all of the materials, and label your containers. You should have a weighing container and an overflow container for every ingredient except estradiol. You should also have a two-gallon mixing container, a five-gallon (or more) glass carboy, and a bottling jar.

If you ordered more than one bottle of something, keep only one out on your work surface. This will help keep the space less cluttered. You can also have the bottling station set up separately to keep things organized.

2. Put on PPE

This means long sleeves, gloves, and goggles. If you have long hair, put it up before beginning.

3. Add 16.4 grams of estradiol in the two-gallon mixing container.

Place your estradiol weighing container on the scale and tare (15) it. Then add 16.4 grams of estradiol using a spoon. If you add too much, scoop some back into the container that the estradiol came in. Then pour the estradiol into the two-gallon glass jar. Some estradiol will likely remain in the cup. We will deal with that in a second.

4. Measure out 2872.9 grams of alcohol to the mixing container and mix vigorously.

Place the alcohol weighing container on the larger scale and tare it. Then add 2872.9 grams of alcohol. If you add too much, pour some out into the alcohol overflow jar until you've got the number right. When you are weighing out alcohol for the next batch, add this overflow into the alcohol weighing container first. As you pour alcohol into the mixing container, have someone hold the estradiol weighing container in the mixing jar and pour in the alcohol such that it washes it out. Once the alcohol has been poured in, mix vigorously it for one minute using a glass stirring rod. If you don't have one, use a large metal serving spoon.

5. Add 2585.7 grams of distilled water to the mixing container and stir.

Use the large scale to measure out 2585.7 grams of distilled water. Use the water overflow jar to pour out any overflow. When you've got the amount right, add it to the mixing container and mix it vigorously for one minute.

6. Add 1026.6 grams of propylene glycol and stir.

Follow these steps for propylene glycol (PG). PG overflow goes into the PG overflow jar; add it to the next batch. If you want to be especially precise, make sure to weigh the

weighing container after you've poured the propylene glycol into the mixing container, so you can tell exactly how much remains in the container. Write this amount down and add slightly more than that amount to the PG weighing container. Add this to the mixing jar, then check the weight to see how much actually ended up in the mixing jar. Repeat until you're satisfied that you're close enough. Once you are done adding PG, mix vigorously for one minute.

7. Add 342.2 grams of diethylene glycol monoethyl ether and stir.

Follow this same procedure for diethylene glycol monoethyl ether and mix vigorously for one minute.

8. Pour the mixing container into the carboy; begin bottling; start the next batch.

When you have finished steps 1-7, you have completed a two-gallon batch. Using a large clean funnel, pour all of the contents of the mixing container into the glass carboy. The bottling team can then pour the transdermal estrogen out of the carboy and into another wide-mouth container. From there, they can scoop out the transdermal estrogen using a ½ or ¾ measuring cup and a funnel to pour it into bottles. Leave a little room at the top when you fill the bottles—otherwise, when you add the dropper lid, it will overflow. After filling a bottle, dry it with a towel and then add a label. Store the bottle in whatever box or container you're keeping the transdermal estrogen in before distributing it.

While one group of people is bottling, another group should repeat steps 1-7. Continue to do so until you no longer have enough raw materials to make another batch. At that point, you can either stop and help with bottling or measure out the

last of whatever ingredient you don't have enough of, and then calculate new amounts for all the other ingredients using the ratios provided. For example, if you only have 1500 grams of alcohol, you can't make a full batch. But since you know that alcohol is 42% of the batch by weight, you can work out what the total weight of the last (smaller) batch should be and make one more batch before you reorder supplies.

9. Clean up your workspace.

When you're done, clean up your work area. Tear off all of the labels of the packages you received and burn them (somewhere far away from the alcohol). This is to prevent you from putting a bunch of incriminating evidence into the same dumpster. Once all of the labels are disposed of, you can discard the boxes as regular recycling. If you peel the labels off the chemicals you bought (the propylene glycol and diethylene glycol monoethyl ether), you can also dispose of them as normal recycling. If not, dispose of each one in a separate dumpster that cannot be connected to you.

Empty any remaining overflow containers back into their original bottles. Wash all non-disposable lab equipment thoroughly. Return all of your supplies to storage. You should have about 300 bottles filled, though you might have less, depending on whether you worked until you ran out of an ingredient or just stopped when you didn't have enough for a full batch.

10. Print zines

We made a zine explaining our process and goals to distribute along with the transdermal estrogen. We designed it from scratch because we didn't have a model to work from.

You're welcome to take the one we made, change out the contact information and any other details, and print your own edition. Make sure to change the title of the zine to "Boobs Not Bombs—[Your chapter's name]" or something other than the title of our zine, so as to not confuse people. If you'd like an electronic copy of our zine for editing, email us at fairywingsma@protonmail.com .

Giving the length of this zine, printing will be expensive. We recommend finding someone with a printing hook up.

Distribute

1. Create a distribution network.

For a clandestine arrangement, keep the bottles yourself and distribute them through word of mouth only. If you're comfortable with a more public arrangement, you could advertise online and mail the bottles out. If you want to go this route, you could contact diyhrt.cafe and see if your small operation can be listed on the website. You could also set up a BnB station somewhere presenting the bottles and zines alongside a donation jar. Periodically check the sites to keep them stocked.

You could also offer your wares at Really Really Free Markets (16) , Food Not Bombs servings, drag shows, art spaces, and any other location frequented by people who might like to have access to estrogen. Of particular interest are places (such as Republican-controlled states) that are making it increasingly difficult to access hormones.

The more decentralized the network that is producing estrogen, the more difficult it will be to suppress it.

2. Distribute bottles.

Once you know where to take the bottles/zines, physically transport them to all of the various locations. You could mail them, but that would be expensive, as the bottles are heavy. If you ship bottles, package them so they don't shatter in transit.

If you're distributing at physical locations, you could set up a station with bottles, zines, and a donation jar. This might necessitate a folding table or rack for each location. For a donation jar, you could cut an opening in the lid of an old coffee container and write "donations" in large visible letters on it.

Once you have run out of bottles and zines, collect a final round of donations, conduct any additional fundraising necessary, and then repeat the process from the beginning.

Further Resources

–The Zine Patents and Spreadsheets that this article is derived from can be found at: https://cryptpad.fr/drive/#/2/drive/view/isZDZxnR6gLfyvL94EdSYfypGFV1J3yD0oGOLk4cerU/

–transfemscience.org - We recommend this website for your research needs. The site is run by transfemme people for transfemme people and interested medical practitioners. We recommend spending a considerable amount of time learning about feminizing hormone therapy.

–transdiy.reddit.com

–estrogel.reddit.com

—hrt.cafe—This site is great for sourcing everything you'd need for feminizing hormone therapy, including antiandrogens. The downside is that the site only includes items that must be purchased online.

Links from the texts

1. https://cryptpad.fr/drive/#/2/drive/view/isZDZxnR6gLfyvL94EdSYfypGFV1J3yD0oGOLk4cerU/

2. https://transfemscience.org/articles/genital-e2-application/

3. https://transfemscience.org/articles/genital-e2-application/

4. https://transfemscience.org/articles/estrogens-blood-clots/

5. https://transfemscience.org/articles/breast-cancer/

6. https://transfemscience.org/articles/transfem-intro/

7. https://cryptpad.fr/drive/#/2/drive/view/isZDZxnR6gLfyvL94EdSYfypGFV1J3yD0oGOLk4cerU/

8. https://www.youtube.com/watch?v=d-7o9xYp7eE

9. https://crimethinc.com/2004/11/01/what-is-security-culture

10.https://ssd.eff.org/

11. https://tails.boum.org/

12. https://cryptpad.fr/

13. https://pubchem.ncbi.nlm.nih.gov/compound/estradiol

14. Duckduckgo.com

15. Tare: a deduction from the gross weight of a substance and its container made in allowance for the weight of the container

16. https://crimethinc.com/2007/10/27/the-really-really-free-market-instituting-the-gift-economy

A note about email security. The only way to ensure the security of an email server is to run it yourself, and running email servers is not easy. The way that email functions involves a lot of information being transferred in the clear in order to allow for the routing of messages. In this sort of structure, the best we can do is encrypt the message content. Protonmail provides encryption without the users having to do any work, as long as they are messaging other users of the service or have someone's keys loaded into their account's keychain. Protonmail does have access to your registration details and the times that certain IPs accessed accounts, and they have provided that information to governments before. If you sign up with information that does not lead back to you and always use a VPN or Tor to check your inbox, this information should not be compromising.

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"[In the DIY] framework, both abortion and gender transition would be something like resources for personal and collective autonomy—means to a life characterized by abundance, not dramatized medical procedures contingent on bizarre criteria of deservingness."